

WHAT IS CLAIMED IS:

1. A copying machine comprising:

a reading unit which reads a document to generate image

5 data;

a reducing unit which reduces the image data at a predetermined reduction ratio to generate reduced image data; and

10 a recording unit which forms an image in a predetermined recording area on a recording medium on the basis of one of the image data generated by the reading unit and the reduced image data generated by the reducing unit, wherein:

15 at least when the recording unit forms the image on the basis of the reduced image data, the reading unit reads an extended reading area of the document larger than the recording area.

2. The copying machine according to claim 1, wherein

when the reducing unit is not used, the reading unit reads an

20 area of the document equal to the recording area.

3. The copying machine according to claim 1, wherein when the recording unit forms the image on the basis of the image data generated by the reading unit, the reading unit reads

25 an area of the document equal to the recording area.

4. The copying machine according to claim 1, wherein when the recording unit forms the image on the basis of the image data generated by the reading unit, the reading unit reads  
5 the extended reading area of the document.

5. The copying machine according to claim 1, wherein the extended reading area of the document is an area larger in a main scanning direction than the recording area of the  
10 recording medium.

6. The copying machine according to claim 1, wherein a ratio of a length of the recording medium in a sub-scanning direction to a length of the document in the sub-scanning  
15 direction is set as the reduction ratio.

7. The copying machine according to claim 6, wherein the reading unit detects the length of the document in the sub-scanning direction.

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8. The copying machine according to claim 1, wherein a value in proportion to a ratio of a length of the recording medium in a sub-scanning direction to a length of the image data in the sub-scanning direction is set as the reduction ratio.

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9. The copying machine according to claim 1, wherein a ratio of a length of the recording medium in a main scanning direction to a length of the document in the main scanning direction is set as the reduction ratio.

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10. The copying machine according to claim 1, wherein when the reading unit detects a length of the document in a sub-scanning direction greater than or equal to a predetermined threshold value, the reduction ratio is set to a predetermined 10 value.

11. The copying machine according to claim 1, further comprising:

15 a buffer which temporarily stores the image data generated by the reading unit before outputting the image data to the reducing unit or the recording unit; and

a preparatory reducing unit which thins out the image data before storing the image data in the buffer.

20 12. A copying method comprising:

reading a document to generate image data;

reducing the image data at a predetermined reduction ratio to generate reduced image data; and

forming an image in a predetermined recording area on

25 a recording medium on the basis of one of the image data generated

in the reading and the reduced image data generated in the reducing, wherein:

5 at least when in the forming, the image is formed on the basis of the reduced image data, an extended reading area of the document, which is larger than the recording area, is read in the reading.

13. The copying method according to claim 12, wherein when the reducing is not performed, an area of the document 10 equal to the recording area is read in the reading.

14. The copying method according to claim 12, wherein the image is formed on the basis of the image data in the recording, an area of the document equal to the recording area is read 15 in the reading.

15. The copying method according to claim 12, wherein when the image is formed on the basis of the image data in the recording, the extended reading area of the document is read 20 in the reading.

16. The copying method according to claim 12, wherein the extended reading area of the document is an area larger in a main scanning direction than the recording area of the 25 recording medium.

17. The copying method according to claim 12, further comprising:

5 setting a ratio of a length of the recording medium in a sub-scanning direction to a length of the document in the sub-scanning direction as the reduction ratio.

18. The copying method according to claim 17, further comprising:

10 detecting the length of the document in the sub-scanning direction.

19. The copying method according to claim 12, further comprising:

15 setting a value in proportion to a ratio of a length of the recording medium in a sub-scanning direction to a length of the image data in the sub-scanning direction as the reduction ratio.

20 20. The copying method according to claim 12, further comprising:

a ratio of a length of the recording medium in a main scanning direction to a length of the document in the main scanning direction as the reduction ratio.

21. The copying method according to claim 12, further comprising:

detecting a length of the document in a sub-scanning direction; and

5 setting the reduction ration to a predetermined value. when the length of the document in the sub-scanning direction is greater than or equal to a predetermined threshold value.

22. A copying machine comprising:

10 a reduction ratio setting section which sets a reduction ratio;

a control section which compares the reduction ratio with a threshold value;

15 an effective area setting section which detects a length of a document in a main scanning direction to set an effective area;

a reading section which reads the document to generate image data;

20 a data processing section which reduces the image data on the basis of a comparison result provided by the control section, the image data, and the effective area; and

a recording section which forms an image on a recording area of a recording medium on the basis of the image data reduced by the data processing section.

23. The copying machine according to claim 22, wherein  
when the control section determines that the reduction ratio  
is smaller than the threshold value, the effective area setting  
section sets the effective area to be larger than the recording  
5 area.

24. The copying machine according to claim 22, wherein  
when the control section determines that the reduction ratio  
is greater than or equal to the threshold value, the effective  
10 area setting section sets the effective area to correspond to  
the recording area.

25. The copying machine according to claim 22, wherein  
when the control section determines that the reduction ratio  
15 is greater than or equal to the threshold value, the data  
processing section discards a portion of the reduced image data,  
which is out of the recording area, and the recoding section  
forms the image on the basis of the remaining reduced image  
data.

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26. The copying machine according to claim 22, wherein  
the effective area setting section sets the effective area so  
that a length of the effective area in the main scanning direction  
is larger than the detected length of the document in the main  
25 scanning direction.

27. The copying machine according to claim 22, wherein  
the effective area setting section sets the effective area so  
that a length of the effective area in the main scanning direction  
5 is larger than a length of the recording area of the recording  
medium in the main scanning direction.

28. The copying machine according to claim 22, wherein  
the reduction ratio setting section sets a ratio of a length  
10 of the recording medium in a sub-scanning direction to a length  
of the document in the sub-scanning direction as the reduction  
ratio.

29. The copying machine according to claim 22, wherein  
15 the reduction ratio setting section sets a value in proportion  
to a ratio of a length of the recording medium in a sub-scanning  
direction to a length of the image data in the sub-scanning  
direction as the reduction ratio.

20 30. The copying machine according to claim 22, wherein  
the reduction ratio setting section sets a ratio of a length  
of the recording medium in a main scanning direction to a length  
of the document in the main scanning direction as the reduction  
ratio.